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UTILITY OF DOBUTAMINE STRESS ECHOCARDIOGRAPHY AS PART OF THE PRE-LIVER TRANSPLANT EVALUATION

Poster Contributions
Poster Sessions, Expo North
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Session Title: Imaging: Echocardiographic Imaging of Patients with CAD: I
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Introduction: Dobutamine stress echocardiography (DSE) is commonly used to risk stratify patients in the cardiac evaluation prior to orthotopic liver transplantation (OLT). Data regarding accuracy to predict obstructive coronary artery disease (CAD) using this approach remains limited.

Methods: A retrospective chart review of 2010 consecutive patients who underwent OLT at Mayo Clinic in Florida between 1998 and 2010 was performed. Of 2010 patients, 65 underwent invasive coronary angiography (ICA) within one year of DSE and were included in our study. Based on DSE results, patients were stratified into one of three groups: non-ischemic, ischemic, and indeterminate. The relationship between DSE, ICA, and death from all cause and cardiac-related cause with a minimum three year follow-up period were analyzed.

Results: There was no difference in age, gender, severity of liver disease, and echocardiographic findings among the groups. Forty-four percent of patients (n=12) with an abnormal result on DSE were found to have moderate or severe obstructive CAD on cardiac catheterization, while 49% of patients (n=17) with a normal finding on DSE had moderate or severe CAD. Of those who died from a documented cardiac etiology, 60% (n=3) had normal stress test results, 20% (n=1) had abnormal findings, and 20% (n=1) had an indeterminate DSE result. When compared with ICA, our study demonstrated that DSE has a sensitivity of 41.4%, specificity of 54.5%, positive predictive value of 44.4%, and negative predictive value of 51.4%. Furthermore, no difference in ICA results (p=0.95) and overall cardiac-related mortality (p=0.33) were noted between the three groups.

Conclusion: Although widely used, DSE may not always accurately reflect the severity of obstructive CAD in patients undergoing OLT.